

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

Claim 1 (currently amended): A method for routing and caching packets of data in a multicast network, comprising:

receiving a packet having a header section and a payload section;

inspecting the payload section of the packet in a network core for use in determining how to route the packet to subscribers;

selectively routing the packet based upon the inspecting; and

locally caching data from the packet in a core routing node in the network core, wherein the core routing node is located upstream from an edge routing node in a direction moving away from a subscriber machine.

Claim 2 (original): The method of claim 1, further including performing the inspecting step at a router.

Claim 3 (original): The method of claim 1 wherein the inspecting step includes applying a filter to information in the payload section.

Claim 4 (original): The method of claim 3, further including propagating the filter to a router in the network for use in performing the inspecting.

Claim 5 (original): The method of claim 1, further including programming a router in the network for performing the receiving, inspecting, and routing steps.

Claim 6 (original): The method of claim 1 wherein the inspecting step includes inspecting attributes for use in determining how to route the packet.

Claim 7 (original): The method of claim 1, further including time marking the cached data.

Claim 8 (original): The method of claim 1, further including indexing the cached data.

Claim 9 (original): The method of claim 1, further including:

receiving a request for data; and  
determining whether the cached data satisfies the request.

Claim 10 (original): The method of claim 1, further including:

locally caching data from the packet at an edge routing node.

Claim 11 (original): The method of claim 1, further including:

removing the cached data after the expiration of a time frame T.

Claim 12 (currently amended): A network for routing and caching packets of data, comprising:

an edge routing node that receives and routes packets having a header section and a payload section, the edge routing node including:

an intelligent router that routes the received packets, the intelligent router including instructions for:

inspecting the payload section of the packets in a network core for use in determining how to route the packets to subscribers; and

selectively routing the packets based upon the inspecting; and

wherein the network further comprises a core routing node located in the network core and a cache manager located in the core routing node -[[,]] operatively connected to the intelligent router, the cache manager including instructions for:

locally caching data from the packets in a local cache in the core routing node, wherein the core routing node is located upstream from the edge routing node in a direction moving away from a subscriber machine; and

~~one or more core routing nodes that receive and rout the packets.~~

Claim 13 (original): The network of claim 12, further comprising:

an agent, operatively connected to the edge routing node, that includes instructions for:

determining location of cached data;

retrieving cached data from the local cache; and

processing retrieved cache data.

Claim 14 (canceled).

Claim 15 (original): The network of claim 12, further comprising:

a plurality of channel manager that provide properties for a plurality of channels.

Claim 16 (original): The network of claim 12, wherein the cache manager further includes instructions for:

time marking the cached data.

Claim 17 (original): The network of claim 12, wherein the cache manager further includes instructions for:

indexing the cached data.

Claim 18 (original): The network of claim 12, wherein the cache manager further includes instructions for:

receiving a request for data; and

determining whether the cached data satisfies the request.

Claim 19 (currently amended): An apparatus for routing and caching packets of data in a multicast network, the apparatus including a plurality of processors and instructions for:

receiving a packet having a header section and a payload section;

inspecting the payload section of the packet in a network core for use in determining how to route the packet to subscribers;

selectively routing the packet based upon the inspecting; and

locally caching data from the packet in a core routing node in the network core, wherein the core routing node is located upstream from an edge routing node in a direction moving away from a subscriber machine.

Claim 20 (original): The apparatus of claim 19, wherein the plurality of processors include a first processor and a second processor, wherein the first processor executes the inspecting and selectively routing instructions and the second processor executes the locally caching instruction.